

Page 2, between lines 23 and 24 insert the section heading:

ar
-- SUMMARY OF THE INVENTION --

Page 7, between lines 24 and 25 insert the section heading:

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-- DETAILED DESCRIPTION --

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IN THE CLAIMS

Cancel claims 1 through 13 without prejudice or disclaimer and insert the following new claims 14 through 38.

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-- 14. Transparent fireproof glazing comprising at least two glass sheets and an intumescent layer of material being located between the glass sheets, the layer containing a phosphate-based compound and a substance from the group consisting of pyrogenous silica and a mixture of pyrogenous silica and alumina.

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15. Glazing according to Claim 14, wherein the phosphate-based compound is a hydrogen phosphate of X, where X is selected from the group consisting of Mg, Ca and Al.

16. Glazing according to Claim 15, wherein the phosphate-based compound has an atomic ratio P/X greater than 2.0.

17. Glazing according to Claim 14, wherein the intumescent layer further includes at least one of :

- (a) a salt of aluminum, or
- (b) a hydroxide of aluminum.

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18. Glazing according to Claim 17, wherein X is Mg and the atomic ratio of Al/Mg is in the range of between 0.1 to 0.4.

19. Glazing according to Claim 14, and further including at least one of the following features (a) through (c):

- (a) the silica in the intumescent layer is composed of particles having a grain size in the range of between 7 and 40 nanometers;
- (b) the quantity of silica in the intumescent layer is between 1 and 10 % by weight of the intumescent layer;
- (c) the intumescent layer includes water in the amount of between 18 to 40% by weight of such layer.

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20. Glazing according to Claim 19, and including at least two of the features (a) through (c).

21. Glazing according to Claim 19, and including all of the features (a) through (c).

22. Glazing according to Claim 14, wherein the quantity of silica in the intumescent layer is between 2 and 6 % by weight.

23. Glazing according to Claim 14, wherein the intumescent layer includes water in the amount of between 30 to 35% by weight of such layer.

24. Glazing according to Claim 14, wherein the intumescent layer includes water in an amount which is adjusted so that the refractive index of the intumescent layer approximates the

refractive index of the silica contained therein.

25. Glazing according to Claim 14, wherein the intumescent layer includes an additive so that the refractive index of the intumescent layer approximates the refractive index of the silica contained therein.

26. Glazing according to Claim 25, wherein the additive is present in an amount not exceeding 15% by weight of the intumescent layer.

27. Glazing according to Claim 25, wherein the additive is selected from the group consisting of glycerol, DMSO and ethylene glycol.

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28. Glazing according to claim 25, wherein the additive has a higher index of refraction than the index of refraction of the phosphate-based compound.

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29. Glazing according to Claim 14, wherein the intumescent layer includes a water content and a silica context such that the intumescent layer is sufficiently fluid to flow between the glass sheets and further forms a gel therebetween in approximately 24 hours.

30. A method of forming a fireproof glazing including at least two glass sheets with an intumescent layer therebetween, the intumescent layer having sufficient fluidity to flow between the glass sheets and to thereafter form a gel therebetween, comprising the steps of:

- (a) providing a phosphate-based solution having a first index of refraction;
- (b) mixing a pyrogenous silica having a second index of refraction with said

phosphate-based solution; and

(c) adjusting as necessary the first index of refraction to approximate the second index of refraction such that the intumescent layer flows between the glass sheets and thereafter forms a gel as aforesaid.

31. The method according to Claim 30, wherein step (c) is at least one of the following:

- (d) adjusting the amount of water in the phosphate-based solution;
- (e) providing an additive to change the first index of refraction.

A 4 32. The method according to Claim 31, and including both steps (d) and (e).

33. The method according to Claim 30, wherein the amount of said pyrogenous silica is between about 1 and 10% by weight of the intumescent layer.

34. The method according to Claim 30, wherein the phosphate-based solution has an atomic ratio P/X greater than 2, and where X is selected from the group consisting of Mg, Ca and Al.

35. The method according to Claim 30, wherein the intumescent layer further includes a crystal formation retardant which at least retards, if not prevents, the formation of silica crystals.

36. The method according to Claim 25, wherein the phosphate-based solution includes phosphate of magnesium and the crystal formation retardant includes aluminum present in an atomic ratio Al/Mg in the range of between 0.05 and 0.4.